

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1           1. (Original) A thin film transistor comprising:  
2           a buffer layer formed on a substrate;  
3           an activation layer formed on said buffer layer; and  
4           a gate insulation layer formed on said substrate including said activation layer,  
5           with said buffer layer having a step formed between a lower part of said activation layer and  
6           a part except said lower part of said activation layer, and said step being a half or less of the  
7           thickness sum of said activation layer and gate insulation layer.

1           2. (Original) The thin film transistor according to claim 1, wherein said buffer layer has a  
2           step to such a degree that thickness of said gate insulation layer is not changed on said side wall of  
3           said buffer layer.

1           3. (Currently Amended) The thin film transistor according to claim 1, wherein a thickness  
2           of the gate insulation layer is at least 400 Å when [[the]] a thickness of [[SPC]] solid-phase  
3           crystallization polysilicon is 300 Å and step is 350 Å in the activation layer.

1           4. (Currently Amended) The thin film transistor according to claim 1, wherein thickness of  
2           the gate insulation layer is at least 1,000 Å when [[the]] a thickness of [[ELA]] excimer laser  
3           annealing polysilicon is 500 Å and step is 750 Å in the activation layer.

1           5. (Currently Amended) The thin film transistor according to claim 2, wherein a thickness  
2           of the gate insulation layer is 400 Å or more when [[the]] a thickness of [[SPC]] solid-phase  
3           crystallization polysilicon is 300 Å and step is 350 Å in the activation layer.

1           6. (Currently Amended) The thin film transistor according to claim 2, wherein thickness of  
2           the gate insulation layer is 1,000 Å or more when [[the]] a thickness of [[ELA]] excimer laser  
3           annealing polysilicon is 500 Å and step is 750 Å in the activation layer.

1           7. (Withdrawn) A method for fabricating said thin film transistor of claim 1, comprising the  
2           steps of:

3           depositing an amorphous silicon layer on a substrate equipped with buffer layer;  
4           forming a polycrystalline silicon layer by crystallizing said amorphous silicon layer;  
5           forming an activation layer by etching said polycrystalline silicon layer;  
6           treating the surface of said activation layer; and  
7           depositing a gate insulation layer on said substrate,  
8           with etching time being controlled in said activation layer forming process and activation  
9           layer surface treatment process so that step between a lower part of gate in the buffer layer and a part

10 except the lower part of said gate has a step value corresponding to a half or less of the thickness sum  
11 of said activation layer and gate insulation layer.

1 8. (Withdrawn) The method for fabricating a thin film transistor according to claim 7,  
2 wherein the etching time is controlled so that said buffer layer has a step to such a degree that  
3 thickness of said gate insulation layer is not changed on said side wall of said buffer layer.

1 9. (Withdrawn) The method for fabricating a thin film transistor according to claim 7,  
2 wherein the etching time is controlled to accommodate said buffer layer having a step corresponding  
3 to a half or less of the thickness sum of the activation layer and gate insulation layer.

1 10. (Withdrawn) The method for fabricating a thin film transistor according to claim 9,  
2 wherein the etching time is controlled so that said buffer layer has a step to such a degree that  
3 thickness of said gate insulation layer is not changed on said side wall of said buffer layer.

1 11. (Currently Amended) The method for fabricating a thin film transistor according to claim  
2 7, wherein a thickness of said gate insulation layer is 400 Å or more when the thickness of [[SPC]]  
3 solid-phase crystallization polysilicon is 300 Å and step is 350 Å in said activation layer.

1 12. (Currently Amended) The method for fabricating a thin film transistor according to claim  
2 7, wherein thickness of said gate insulation layer is 1,000 Å or more when the thickness of [[ELA]]

3 excimer laser annealing polysilicon is 500 Å and step is 750 Å in said activation layer.

1 13. (Original) A thin film transistor, comprising:  
2 a buffer layer;  
3 an activation layer formed on said buffer layer; and  
4 a gate insulation layer formed on said buffer layer and said activation layer,  
5 with said buffer layer having a step formed between a lower part of said activation layer and  
6 a part except said lower part of said activation layer, and said step being up to a half of the thickness  
7 sum of said activation layer and gate insulation layer.

1 14. (Original) The thin film transistor according to claim 13, with said step being controlled  
2 according to said gate insulation layer being deposited to an even thickness on a side wall of said  
3 activation layer.

1 15. (Currently Amended) The thin film transistor according to claim 13, with a thickness of  
2 said gate insulation layer being at least 400 Å when ~~[[the]]~~ a thickness of ~~[[SPC]]~~ solid-phase  
3 crystallization polysilicon is 300 Å and step is 350 Å in said activation layer.

1 16. (Currently Amended) The thin film transistor according to claim 13, with a thickness of  
2 said gate insulation layer being at least 1,000 Å when ~~[[the]]~~ a thickness of ~~[[ELA]]~~ excimer laser  
3 annealing polysilicon is 500 Å and step is 750 Å in said activation layer.

1           17. (Withdrawn) A method for fabricating a thin film transistor including a buffer layer, an  
2           activation layer formed on said buffer layer, and a gate insulation layer formed on said buffer layer  
3           and said activation layer, with said buffer layer having a step formed between a lower part of said  
4           activation layer and a part except said lower part of said activation layer, and said step being up to  
5           a half of the thickness sum of said activation layer and gate insulation layer, said thin film transistor  
6           comprising:

7           forming a polycrystalline silicon layer;

8           forming an activation layer by etching said polycrystalline silicon layer;

9           treating the surface of said activation layer; and

10          depositing a gate insulation layer on said substrate,

11          with etching time being controlled in the activation layer forming process and activation layer  
12          surface treatment process to accommodate a step between a lower part of a gate in said buffer layer  
13          and a part except the lower part of said gate having a step value corresponding up to a half of the  
14          thickness sum of said activation layer and gate insulation layer.

1           18. (Withdrawn) The method for fabricating a thin film transistor according to claim 17,  
2           wherein the etching time is controlled to accommodate said buffer layer including the step to such  
3           a degree where said gate insulation layer is deposited to an even thickness on a side wall of said  
4           activation layer.

1           19. (Withdrawn) The method for fabricating a thin film transistor according to claim 17,  
2 wherein the etching time is controlled to accommodate said buffer layer having a step corresponding  
3 up to half of the thickness sum of the activation layer and gate insulation layer.

1           20. (Currently Amended) The method for fabricating a thin film transistor according to claim  
2 17, wherein a thickness of said gate insulation layer is at least 400 Å when the thickness of [[SPC]]  
3 solid-phase crystallization polysilicon is 300 Å and the step is 350 Å in the activation layer or the  
4 thickness of said gate insulation layer is at least 1,000 Å when the thickness of [[ELA]] excimer laser  
5 annealing polysilicon is 500 Å and the step is 750 Å in said activation layer.